

## Abstract of the Disclosure

### PROCESS FOR PREPARING A SILICA/RUBBER BLEND

5       The present invention relates to a technique to efficiently and effectively  
disperse silica throughout a rubbery polymer. By utilizing this technique mechanical  
mixing procedures that are energy intensive and require large capital investments in  
mixing equipment can be significantly reduced. By reducing the amount of shearing  
forces to which the rubber is subjected polymer degradation is also significantly reduced.  
The utilization of the technique of this invention also results in a uniform blend of the  
10       silica throughout the rubber and consequently better interaction between the silica and  
the rubber. This results in better physical properties, such as higher modulus. The  
subject invention more specifically discloses a process for preparing a silica/rubber blend  
which comprises dispersing silica, a silica coupling agent, and a low molecular weight  
end-group functionalized diene rubber throughout a cement of a conventional rubbery  
15       polymer, and subsequently recovering the silica/rubber blend from the organic solvent.  
The present invention further reveals a tire which is comprised of a generally toroidal-  
shaped carcass with an outer circumferential tread, two spaced beads, at least one ply  
extending from bead to bead and sidewalls extending radially from and connecting said  
tread to said beads, wherein said tread is adapted to be ground-contacting, and wherein  
20       said tread is comprised of the silica/rubber blend made by dispersing silica, a silica  
coupling agent, and a low molecular weight end-group functionalized diene rubber  
throughout a cement of a conventional rubbery polymer, and subsequently recovering the  
silica/rubber blend from the organic solvent.